

### Home Brewery Solutions – Steam Condenser

# Steam Mitigation

### Problem

As electric brewing becomes more popular, indoor brewing becomes more popular. But folks putting a brewery in small indoor spaces must contend with the buildup of moisture during the boil.

### Solutions

One popular route to address moisture/humidity issues in the brewery is via a ventilation system, but that isn't possible for all spaces.



# Enter the Steam Condenser

Used in some professional breweries, this option is now available for the homebrew scale

## How it works

A chamber is attached to the kettle, and a cold-water spray nozzle is positioned to spray fine mist of water *just* below the entry point of steam. Much like how a shower curtain blows toward you during a shower, this spraying water creates pressure that pulls the steam out of the kettle, mixes it with the cool water, and removes it via a drain tube.

To create the vacuum, the kettle must be sealed with a lid during the boil. DMS and other nasties are removed via the condenser and end up in the wastewater.



There are presently three options for steam condenser systems Spike Condenser Lid •Steam Slayer Make Your Own

# Option 1: Spike Condenser Lid



#### Pros:

Ready to use out of the box with some assembly Uses a submersible pump to push water (no water line needed) Comes with lid No drilling required

#### <u>Cons:</u>

Must be able to fit your kettle Must be connected to lid (no side of kettle installs)

#### Outcome:

### Pictures from Eric

# **Option 2: Steam Slayer**



#### Pros:

Adaptable to any system Comes in multiple sizes Can be attached to side of kettle or top of kettle lid, providing flexibility

#### <u>Cons:</u>

Not out-of-the-box, must be installed Requires drilling 1.5-inch hole wherever installed Requires use of a water line (garden hose fitting) Lid must be purchased

#### Outcome:

First brew day without the condenser created very humid environment in brew room, and two box fans (one at door and window) did not address the massive amount of moisture. With the Steam Slayer attached, humidity never crept above 35% and two 5-gallon buckets of hot water were the waste product (used for cleaning). Smell of water was intense (DMS and hop oil).



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# Option 3: Build One From Scratch



Pros: **Total flexibility** Plenty of forums

#### Cons:

All parts must be researched and sourced Performance tied to your understanding of design Requires the most work

> Thoughts? **Questions? Discussion**?